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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,637	11/15/2001	Kenji Ueda	Q67317	7426

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EXAMINER
CHOWDHURY, TARIFUR RASHID

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/987,637	UEDA ET AL.	
	Examiner	Art Unit	
	Tarifur R Chowdhury	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5,6,9-11 and 18-34* is/are pending in the application.

4a) Of the above claim(s) *18-22 and 26-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,6,9-11,23-25 and 31-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *16 January 2002* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *08/758,093* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Claims 18-22 and 26-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/758,093, filed on 11/27/1996. ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5, 6, 9, 10, 23, 24, 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wenyon, PN 5,659,408.

6. Wenyon discloses in column 5, line 44- column 6, line 49 and shows in Figure 1, a liquid crystal display device using a hologram, characterized in that a liquid crystal display element (200) is provided on a back surface side thereof opposite to a display surface side thereof with a diffuse reflection type hologram (100) capable of diffusing and reflecting light incident thereon from a specific direction only in a direction defined as a viewing region.

Further, Figure 1 of Wenyon clearly shows that a reflector plate (110) is located on the back surface side of the hologram.

Further, hologram is always wavelength selective and can only be played back by light having the wavelength close to the original recorded wavelength. For example if the recorded wavelength is λ_0 and the playback wavelength is $\lambda 1$, it will not produce any diffraction effect (such as reflection or transmission). Therefore, it is clear from the discussion that hologram typically has a different optical function with respect to different respective wavelength.

Accordingly, claims 5 and 6 would have been obvious.

Wenyon also discloses in column 6, lines 4-8 that, liquid crystal layer (20) is composed of a nematic liquid crystal.

As to claims 9, 10, 23 and 24, it is well known in the art that hologram is angular selective. The function of a hologram is to have certain angular range to change the angle between the recording light. Therefore, as to having a particular incident angle, a particular upward angle, a particular downward angle and a particular breadth-wise angle is simply a design choice. Accordingly, claims 9 and 10 would have been obvious.

As to claim 34, employing a hologram having a high wavelength selectivity is well within the level of ordinary skill in the art and thus would have been obvious to optimize device performance.

Claim 31 is a "product-by-process" claim. Patentability of a claim to a product does not rest merely on a difference in the method by which the product is made. Rather, it the product itself which must be new and unobvious. Since the process recited adds no structural limitations, no patentable weight has been given to the process recited in claim 31. (See MPEP sec 806.05(f))

7. **Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wenyon as applied to claims 5, 6, 9, 10, 23, 24, 31 and 34 above and in view of McCoy, USPAT 4,285,029.**

8. Wenyon differs from the claimed invention because he does not explicitly disclose the claimed self-luminous type backlight.

McCoy teaches in column 1, lines 9-22 that, self-luminous light sources are commonly used to backlight liquid crystal displays in digital watches and other electronic instruments with visual displays. Self-luminous light source requires no electrical power source, illuminates the liquid crystal display in the absence of ambient light without a switching operation, and provides many years of maintenance free operation.

McCoy is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to use a self-luminous type backlight.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Wenyon by using a self-luminous backlight unit so that no electrical power source is required and many years of maintenance free operation is obtained.

9. **Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wenyon as applied to claims 5, 6, 9, 10, 23, 24, 31 and 34 above and in view of Ueda et al., (Ueda), USPAT 5,843,598.**

10. Wenyon discloses and shows in Figure 1, a liquid crystal display device characterized in that a polarizing plate (22b), a hologram (120) and a reflecting layer (110) are laminated together.

Wenyon differs from the claimed invention because he does not explicitly disclose the claimed color tuning film being laminated on the hologram.

Ueda discloses in column 2, lines that by laminating a color tuning film on a hologram, it is possible to widen the bandwidth of diffracted wavelength.

Ueda is evidence that ordinary workers in the art would find a reason, suggestion or motivation to laminate a color tuning film on a hologram.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Wenyon such that laminate a color tuning film on the hologram so that the bandwidth of diffracted light is widened, as per the teachings of Ueda.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wenyon in view of Ueda as applied to claim 32 above and further in view of Weber, USPAT 3,647,289.

12. Wenyon differs from the claimed invention because he does not explicitly disclose that the hologram is a color hologram with interference fringes recorded such that it diffract a plurality of wavelengths including red, green and blue wavelengths.

Weber discloses that using a color hologram with interference fringes recorded such that it diffract a plurality of wavelengths including red, green and blue wavelengths is common and known (col. 5, lines 26-34).

Weber is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a color hologram that diffracts a plurality of wavelengths.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Wenyon when modified by Ueda such that using a color hologram with interference fringes recorded thereon in such a way as to diffract a plurality of wavelengths including red, green and blue wavelengths, to optimize device performance.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 5, 6, 9-11, 23-25 and 31-34 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,384,883. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are in fact broader than the patented claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) JP 11-084373A, JP 10-111501A and JP08-152616A are related to a liquid crystal display including a hologram.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

TRC
September 25, 2002

T. Chowdhury
Patent Examiner
Technology Center 2800